



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,255	11/17/2003	Takahiko Fujiwara	02886.0086	1739
22852 7590 04/19/2007 FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER HANDAL, KAITLY V	
			ART UNIT	PAPER NUMBER
			1764	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/19/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/713,255

Applicant(s)

FUJIWARA, TAKAHIKO

Examiner

Kaity Handal

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanesaka et al. (US 5,804,148) in view of Nishizawa (US 5,108,716).

With respect to claim 1, Kanesaka teaches an apparatus for purifying exhaust gases (fig. 1), comprising: an adsorption-purifying catalyst including: an HC adsorbent (3), and an oxidizing catalyst (4) (col. 3, lines 64-65); a three-way catalyst (5) disposed on an upstream side of the flow of exhaust gases with respect to the HC adsorption-purifying catalyst (3) (as illustrated).

Kanesaka fails to show a three-way catalyst wherein a noble metal is loaded higher on a high loading portion disposed on an upstream part of the three-way catalyst than on an ordinary portion of the three-way catalyst. Nishizawa teaches a metal carrier for a catalytic converter (fig. 1) wherein a three-way catalyst comprised of a noble metal loaded higher on a high loading portion disposed on an upstream part of the three-way catalyst/metal than on an ordinary portion of the three-way catalyst in order to promote catalytic activation at low temperatures (abstract) and achieve a large cost reduction (col. 3, lines 2-12).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a three-way catalyst wherein a noble metal is loaded higher on a high loading portion disposed on an upstream part of the three-way catalyst than on an ordinary portion of the three-way catalyst in Nishizawa's apparatus, as taught by Masaaki, in order to promote catalytic activation at low temperatures and achieve a large cost reduction.

Regarding claims 2-4, Kanesaka et al. in view of Masaaki et al. discloses all of the claims limitations as set forth above, but the references do not explicitly disclose wherein a loading amount the high loading portion of the three-way catalyst/catalyst metal is twice or more of a loading amount of the ordinary portion of the three-way catalyst; and formed within a range of 1/2 of an overall length of the three-way catalyst ranging from an upstream end of the three-way catalyst, and wherein HC adsorption-purifying catalyst includes the HC adsorbent and the oxidizing catalyst with a proportion of the HC adsorbent with respect to the oxidizing catalyst from 5 : 1 to 2 : 3 by volume. The specific loading amount of the high loading portion of the three-way catalyst, range of length of said metal catalyst, and proportion of the HC adsorbent with respect to the oxidizing catalyst, are not considered to confer patentability to the claims. As the reactor cost of construction and efficiency of operation are variable(s) that can be modified, among others, by adjusting said loading amount and range, with said construction cost and operating efficiency both increasing as the loading amount and range is increased, the precise loading amount and range would have been considered a result effective variable by one

Art Unit: 1764

having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed loading amount and range, and proportion of the HC adsorbent with respect to the oxidizing catalyst cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the specific loading amount of the high loading portion of the three-way catalyst, range of length of said metal catalyst, and proportion of the HC adsorbent with respect to the oxidizing catalyst to obtain the desired balance between the construction cost and the operation efficiency (*In re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (*In re Aller*, 105 USPQ 223).

### ***Response to Arguments***

#### **Abstract**

Objection made to the abstract is withdrawn by the examiner due to applicant's amendment.

#### **Prior Art**

Applicant's arguments, see Remarks, filed 12/29/2006, with respect to the rejection(s) of claim(s) 1-4 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further

Art Unit: 1764

consideration, a new ground(s) of rejection is made in view of Kanesaka et al. (US 5,804,148) in view of Nishizawa (US 5,108,716).

Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaity Handal whose telephone number is (571) 272-8520. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KH 

4/12/2007

Application/Control Number: 10/713,255  
Art Unit: 1764

Page 6

\*\*\*



Glenn Calderola  
Supervisory Patent Examiner  
Technology Center 1700